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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/053,421 | 01/16/2002 | Misao Kimura | FUJH 19.343 | 4291 |

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| EXAMINER |
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CERVETTI, DAVID GARCIA

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| ART UNIT | PAPER NUMBER |
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2136

DATE MAILED: 07/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/053,421 | Applicant(s) KIMURA, MISAO | |
| | Examiner David G. Cervetti | Art Unit 2136 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's arguments filed May 11, 2006, have been fully considered.
2. Claims 1-16 are pending and have been examined.

Response to Amendment

3. The objection to claim 9 is withdrawn.
4. It is respectfully submitted that routers using Public Key Encryption and centralized Key Management techniques (Hardjono et al. US Patent 6,725,276, hereinafter Hardjono) were conventional and well known.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "said center-side encryption unit". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

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351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-2, 4, and 10-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Hardjono.

Regarding claims 1 and 10, Hardjono teaches a communication network system having a central management device and a plurality of local area network systems, said central management device and said plurality of local area network systems being connected to each other, each of the plurality of local area network systems having a router and a terminal which are connected to each other via a local area network,

- said central management device comprising:
- a management database for storing at least one common key, each public key assigned to each router and a public key assigned to the central management device; and
- a central-side encryption unit for encrypting the common key by using each public key assigned to each router, and
- sending the encrypted common key to each router (column 5, lines 1-42);
- said router comprising:
- a first router-side decryption unit for decrypting the encrypted common key sent from said center-side encryption unit by using a secret key of the router;
- a storage unit for storing the common key after decryption by said first router-side decryption unit; and

- a router-side encryption unit for encrypting communication data to be sent from a first source terminal in a local area network system of the router to a first destination terminal in another local area network system, or communication data to be sent from the router to the central management device, by using the common key stored in said storage unit (column 5, lines 43-67, column 6, lines 1-49), and
- sending the encrypted communication data to another local area network or the central management device (column 6, lines 50-67, column 7, lines 1-52).

Regarding claims 11-13, Hardjono teaches a router disposed in each of a plurality of local area network systems which are connected to a central management device, the router being connected via a local area network to a terminal disposed in each of the plurality of local area network systems (column 5, lines 1-42), the router comprising:

- a decryption unit for decrypting an encrypted common key sent from said central management device, by using a secret key for said router, said common key being encrypted by using a public key for the router;
- a storage unit for storing said common key after decryption by said decryption unit; and
- an encryption unit for encrypting communication data to be sent from a source terminal in a local area network system of said router to a destination terminal in another local area network system, or communication data to be sent from said router to the central management device, by using the

common key stored in said storage unit (column 5, lines 43-67, column 6, lines 1-49), and

- sending the encrypted communication data to another local area network or the central management device (column 6, lines 50-67, column 7, lines 1-52).

Regarding claims 14-16, Hardjono teaches a central management device connected to a plurality of local area network systems each having a router and a terminal which are connected to each other through a local area network, the central management device comprising:

- a management database for storing at least one common key, each public key assigned to each router and a public key assigned to said central management device, said at least one common key being used by each router to encrypt communication data to be communicated between a terminal of a local area network system and a terminal of another local area network system, or between each router and the central management device (column 5, lines 1-42); and
- an encryption unit for encrypting the common key by using each public key assigned to each router, and sending the encrypted common key to each router (column 3, lines 13-55).

Regarding claim 2, Hardjono teaches wherein

- said central-side encryption unit encrypts the public keys and sends said encrypted public keys to each router (column 5, lines 9-30),

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- said first router-side decryption unit decrypts the encrypted public keys sent from the central-side encryption unit by using the secret key of the router,
- said storage unit stores the public keys after decryption by said first router-side decryption unit (column 4, lines 20-67), and
- said router-side encryption unit selects the public key for a router of another local area network system or the central management device to be a destination from the public keys stored in the storage unit, encrypts the common key by using the selected public key, and sends the encrypted common key to another local area network or the central management device, together with the encrypted communication data (column 5, lines 1-42).

Regarding claim 4, Hardjono teaches wherein said router further comprises: a second router-side decryption unit for decrypting data sent from a second source terminal in another local area network system to a second destination terminal in the local area network system of the router, and sending the data after decryption to said second destination terminal (column 5, lines 1-67).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 3 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hardjono.

Regarding claims 3 and 5, Hardjono does not expressly disclose storing secret concealment terminal data indicating a pair of terminals requiring communicated data to be encrypted and communicating that data to the router. However, Hardjono teaches encrypting communication between routers and terminals. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use other encryption means with the system of Hardjono. One of ordinary skill in the art would have been motivated to perform such a modification to provide for more secure communications (Hardjono, column 9, lines 7-48).

Regarding claims 6-9, Hardjono does not expressly disclose updating the keys. However, Examiner takes Official Notice that updating keys for communication between parties was conventional and well known. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to update the keys used by Hardjono since Examiner takes Official Notice that it was conventional and well known.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David G. Cervetti whose telephone number is (571) 272-5861. The examiner can normally be reached on Monday-Friday 7:00 am - 5:00 pm, off on Wednesday.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DGC

CHRISTOPHER REVAK
PRIMARY EXAMINER

Cell 7/20/06